



California State Fire Marshal Information Bulletin 18-010

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Tank and Pump Residential Fire Sprinklers

The Office of the State Fire Marshal (OSFM) amended the 2016 California Residential Code (CRC) during the Intervening Code Cycle to clarify that the use of a “tank and pump” water supply for a residential fire sprinkler system was acceptable. The amendment also provided guidance on the installation. These proposals were based on the recommendations of the OSFM 2016 Residential Fire Sprinkler Working Group. The use of the tank and pump system provides home owners with an option when there are limitations with achieving the required water demand to residential fire sprinklers.

Shared power

CRC R313.3.5.2.1 item 2.1 The pump shall be connected to a 220-volt circuit breaker shared with a common house hold appliance (E.g. range, oven, dryer).

The intent of CRC section R313.3.5.2.1 is to provide a reliable source of power that is sufficient during a fire event.

The sharing of power with an appliance will monitor the power source, so that the power supply to the pump is not turned off. The circuit breaker must be listed for the total amperage demand. If the amperage draw exceed the circuit breaker's listing, another circuit breaker should be considered that “monitors” the power supply.

110-Volt supply

There are residences that do not have 220-volt capability. CRC section R313.3.5.2.1 requires a 220-volt circuit for the pump. The intent of requiring the 220-volts is that the residential fire sprinkler pump may not be operated for extended periods of time. It has been found that the 220-volt pump is more reliable in this situation.

Residences where 220-volt power is not available the Authority Having Jurisdiction may consider a reliable 110-volt source through an alternate means of compliance as allowed by CBC section 1.11.2.4. Consideration should include a means to ensure a working pump that may include a method where the pump is operated more frequently.